

RAVICH, B.M.

Use of briquetting in the manufacture of metallurgical fuel.
Koks i khim. no.11:21-25 '62. (MIRA 15:12)

1. Moskovskiy institut radioelektroniki i gornoy elektromekhaniki.
(Briquets (Fuel))

YARKHO, N.A.; RAVICH, B.M.; ANDPEYEVA, I.A.

Production of coke from gas coals. Koks i khim. no.3:11-12 '62.
(MIRA 15:3)

1. Moskovskiy gornyy institut.
(Coke)

RAVICH, B.N.

Methods for an automatic and rapid measurement of moisture content in
solid fuel. Izv. tekhn. no. 12:57-60 D '61. (MIRA 15:1)
(Coal--Testing) (Moisture--Measurement)

RAVICH, B.M., inzh.

Use of peat in obtaining ore-peat and fluxed briquets. Torf. prom.
38 no. 3:24-26 '61. (MIRA 14:4)

1. Moskovskiy gornyy institut imeni Stalina.
(Briquets (Fuel)) (Peat)

RAVICH, B.M.

Response to the article "New types of binders for briquetting coal
fines" by L.L.Khotuntsov, V.L.Popov, G.M.Volkov. Ugol' 36 no.2:59-
60 F '61. (MIPA 14:2)

(Briquets (Fuel)) (Binding materials)
(Khotuntsov, L.L.) (Popov, V.L.) (Volkov, G.M.)

RAVICH, B.M., inzh.; CHERNYKH, V.A., inzh.

New trends in coal briquetting. Ugol' Ukr. 4 no.7:8-11 J1
'60. (MIRA 13:8)

1. Moskovskiy gornyy institut.
(Briquets (Fuel))

RAVICH, B.M.

Briquetting iron ores. Metallurg 5 no.6:9-11 Je '60.
(MIRA 13:8)

1. Moskovskiy gorany institut.
(Ore dressing) (Briquets)

BULYNKO, M.G., kand.tekhn.nauk; RAVICH, B.M., inzh.; BARANOVSKIY, Yu.V., inzh.

Mechanization of the grinding and setting of the molding part of
stamping presses. Torf.prom. 36 no.1:32-33 '59. (MIRA 12:3)

1. Kiyevskiy torfyanoy institut (for Bulynko). 2. Moskovskiy gosudarstven-
nyy universitet (for Ravich, Baranovskiy).
(Germany, East--Peat machinery)

RAVICH, B.M.

AUTHOR: None given

68-1-22/22

TITLE: From Letters to the Editorial Office

PERIODICAL: Koks i Khimiya, 1958, No.1, p.63 (USSR).

ABSTRACT: Remarks of I.M. Verkhovskiy, Doctor of Technical Sciences, Professor - Chair of Beneficiation of Minerals of the Moscow Mining Institute (Moskovskiy gornyy institut) on the paper by L.A. Lur'ye and B.M. Ravich "The Production of Metallurgical Coke from Brown Coals of the Northern Kazakhstan", Koks i Khimiya, 1956, No.8, expressed in his letter to the editor are outlined. Verkhovskiy considers that the conclusions of the authors are premature.

In the letter of B.A. Gess, scientific worker of the Institute of Metallurgy of the Ac.Sc. USSR (Institut metallurgii AN SSSR) it is pointed out that the results of tests of briquettes in the above Institute quoted by the authors are not correct. The authors of the paper agreed with some critical remarks, but pointed out the importance of the problem. It is pointed out in the editorial note that the paper was published in view of the importance of the problem and the need for an exchange

Card 1/1 of views on the subject.

AVAILABLE: Library of Congress

TAYTS, Ye.M.; OKLADNIKOV, V.P.; RAVICH, B.M.; ANDREYEVA, I.A.

Metallurgical and smokeless fuel from gas coals and weakly coking
coals. Khim.i tekhn.top.i masel 6 no.3:31-36 Mr '61. (MIRA 14:3)

1. Institut goryuchikh iskopayemykh im. G.M. Krzhizhanovskogo AN SSSR,
Vostochno-Sibirskiy filial Sibirskogo otdeleniya AN SSR i Moskovskiy
gornyy institut im. V.I. Stalina.
(Fuel) (Coal—Carbonization)

LAZAREVA, Ye.N., kandidat biologicheskikh nauk; RAVICH, B.V., kandidat biologicheskikh nauk.

Mechanism of the penicillin resistance of acid-resistant micro-organisms producing penicillinase. Trudy VNIIA no.1:124-131 '53.
(MIRA 8:1)

(Penicillin) (Bacteria) (Penicillinase)

RAVICH, B.V., kandidat biologicheskikh nauk; LAZAREVA, Ye.N., kandidat biologicheskikh nauk.

Penicillinase of acid-resisting microorganisms. Trudy VNIIA no.1:131-140 '53. (MLBA 8:1)
(Penicillinase) (Bacteria)

RAVICH, B.Y. PETROVA, M.A.

Determination of antibacterial properties of preparations
passed through the animal organism. Tr. Akad. med. nauk
(CML 25:5)
Sov. Vol 22:74-77 1952.

RAVICH, B.V., SEMICH, A.I., REZINA, Ya.K.

Mechanism of protective action of antibiotics in experimental
dysentery in white mice. Tr. Akad. med. nauk SSSR, Vol.22:97-
106 1952. (CML 25:5)

1. Communication 1.

A
THERMOLITEVA, Z.V.; VALEDINSKAYA, L.K.; LAZAREVA, Y.M.; AVTSIN, A.P.;
AZIMTSKAYA, A.Y.; BERZINA, Y.M.; RAVICH, B.V.; RYKALOVA, A.M.;
GUSLOVA, A.M.

Experimental studies on protein-free preparations from the
liver and thyroid gland. Tr. Akad. med. nauk SSSR. Vol. 22:
14-21 1952. (CML 25:5)

RAVICH, B.Y., PETROVA, M.A.

Determination of anti-tuberculous effect of anti-biotics
in deep growth of culture of *Mycobacterium tuberculosis*.
Tr. Akad. med. nauk SSSR. Vol 22:72-74 1952. (CML 25:5)

RAVICH, S. V.

YERMOLOVA, Z. I.; SEMICH, A. I.; AVTSIN, A. P.; RAVICH, B. I.;
BEREZINA, Ya. K.; LAZAREVA, Ya. N.; GUSLOVA, A. M.

Studies on streptomycin and on combined preparations of
streptomycin. Tr. Akad. med. nauk SSSR Vol. 22:37-46 1952
(CML 25:5)

RAVICH, B.V.; PETROVA, M.A.

Determination of anti-tubercular properties of preparations which have been
passed through animal organisms. Trudy AMI SSSR 22:74-77 '52. (MLRA 6:6)
(Tuberculosis) (Antibiotics)

YERMOL'YEVA, Z.V.; SEMICH, A.I.; AVTSYN, A.P.; RAVICH, B.V.; BERZINA, Ye.K.;
LAZAREVA, Ye.N.; GUSLOVA, A.M.

Study of streptomycin and of combined streptomycin preparations. Trudy
AMN SSSR 22:37-46 '52. (MLBA 6:6)
(Streptomycin)

RAVICH, B.V.; PETROVA, M.A.

Determination of anti-tubercular activity of antibiotics in a deep growth
of the tubercular culture. Trudy AMN SSSR 22:72-74 '52. (MLRA 6'6)
(Antibiotics) (Tuberculosis)

RAVICH, B.V.; SEMICH, A.I.; BEREZINA, Ye.K.

Mechanism of the protective action of antibiotics in experimental dysentery
of white mice; first report. Trudy AMN SSSR 22:97-106 '52. (MLRA 6:6)
(Antibiotics) (Dysentery)

YERMOL'YEVA, Z.V.; VALEDINSKAYA, L.K.; LAZAREVA, Ye.N.; AVTSYN, A.P.; AZLETSEKAYA,
A.Ye.; BEREZINA, Ye.K.; RAVICH, B.V.; RYKALEVA, A.M.; GUSLOVA, A.M.

Experimental study of protein-free preparations from the liver and the
thymus. Trudy AMN SSSR 22:14-21 '52. (MLRA 6:6)
(Antibiotics) (Tuberculosis)

Ravich B.V.

Penicillinase of acid-resistant microbes. B. V. Ravich and R. N. Lazareva. *Trudy Vsesoyuz. Nauch. Issledovaniy. Inst. Antibiotikov* 1953, No. 1: 131-140. During the investigation of penicillinase formation by acid-resistant microbes, the formation of extracellular penicillinases in the medium of tuberculous, fertile rabbit sputa was observed. The sputa from soil was fertilized with the bacteria *Mycobacterium* and then incubated by the method of B. V. Ravich. The growth of penicillin-resistant strains of *Mycobacterium* penicillinase is not acid-resistant. The increase in activity of penicillinase in *Mycobacterium* is not by penicillinase but by formation of ammonium sulphate. The decrease in activity of penicillinase is by fractional ammonium sulphate.

V. Milgrom

YERMOL'YEVA, Z.V.; SHERMAN, R.Z.; RAVICH, B.V.; YAKIMOVA, M.P.

Results of the treatment of dysentery with streptomycin associated with ecmoline. Klin. med., Moskva 31 no.2:26-30 Feb 1953. (CML 24:3)

1. Professor, Doctor Medical Sciences for Sherman; Candidate Biological Sciences for Ravich. 2. Moscow.

Ravich, B. V.

MD Study of streptomycin when combined with other antibiotics. Z. V. Ermol'eva, A. I. Semich, A. P. Avtsyn, B. V. Ravich, E. K. Bererind, B. N. Lazareva, and A. M. Guslova. *Trudy Akad. Med. Nauk S.S.S.R., Antibiotiki i ikh Primeniye* 22, No. 1, 37-40 (1952).—The therapeutic action of streptomycin is enhanced when combined with penicillin, penicillin and ecmolin, or with PAS (p-aminosalicylic acid). The listed drugs acting as synergists permit the use of smaller doses of streptomycin (1000 units instead of 2000). They also help to overcome the resistance of dysentery and typhoid bacilli to the action of streptomycin. Good results were obtained in exptl. treatment of hemato-genous TB in white mice. A. S. Mirkin

(6)

YERMOL'YEVA, Z.V., professor; SHERMAN, R.Z., doktor meditsinskikh nauk; RAVICH, B.V., kandidat biologicheskikh nauk; YAKIMOVA, M.P. (Moscow).

Results of streptomycin and ecmoline therapy in dysentery. Klin.med. 31 no. 2:26-30 F '53. (MLRA 6:5)

(Dysentery) (Streptomycin--Therapeutic use)

RAVICH, G.B.; BURTSEV, Yu.N.

Heat conductivity of 2,4,6-trinitrotoluene in solid and liquid states. Izv.AN SSSR.Otd khim.nauk no.11:2091-2092 N '61.
(MIRA 14:11)

1. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova
AN SSSR.

(Toluene--Thermal properties)

RAVICH, D. G.

Country : USSR

E

Category: Virology. Viruses of Man and Animals.
Rickettsias.

Abs Jour: Ref Zhur-Biol., No 23, 1958, No 103567

Author : Dunin, K. V.; Shkvatsabaya, T.V.; Ravich, D.G.

Inst : -

Title : Comparative Evaluation of the Diagnostic Significance
of the Rickettsia prowazeki Agglutination Reaction and
the Weil-Felix Reaction in Typhus Patients Treated With
S-Dynathomycin

Orig Pub: Labor delo, 1957, No 5, 24-26

Abstract: No abstract.

Card : 1/1

Bunin, D.G.
BUNIN, K.V.; SHKHVATSABAYA, T.V.; RAVICH, D.G.

Comparison of the diagnostic value of the Rickettsia prowazeki agglutination test and the Weil-Felix reaction for patients with typhus treated with synthomycin. Lab.delo 3 no.5:24-26 S-0 '57.
(MIRA 11:2)

1. Iz kafedry infektsionnykh bolezney (zav. - prof. K.V.Bunin)
I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M.
Sechenova.

(TYPHUS FEVER) (AGGLUTINATION) (CHLOROMYCETIN)

RAVICH, G. A.

PHASE I BOOK EXPLOITATION

SOV/3941

Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut tekhnologii i mashinostroyeniya

Primeneniye ekzotermicheskikh smesey dlya podogreva pribyley lit'ya (Use of Exothermic Mixtures for Preheating of Risers) Moscow, Tsentr. byuro nauchno-tekhn. inform. tyazhelogo mashinostroyeniya, 1959. 48 p. Errata slip inserted. 1,500 copies printed: (Series: Obmen peredovym opytom)

Additional Sponsoring Agency: USSR. Gosudarstvennaya planovaya komissiya. Glavnoye upravleniye nauchno-issledovatel'skikh i proyektnykh organizatsiy. Eds.: (title page): A.V. Lopatin, Engineer, and M.I. Kuznetsova; Tech. Ed.: P.I. Seleznev.

PURPOSE: This collection of articles is intended for engineers and skilled workers of metallurgical plants.

COVERAGE: Articles of this collection review exothermic mixtures used at metallurgical plants to preheat risers. Components and properties of these mixtures are indicated. Higher yields, better quality of castings, and economy of

Card 1/2

Use of Exothermic Mixtures (Cont.)

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metal are pointed out by authors as advantages afforded by the process of preheating of risers by exothermic mixtures. The preheating operations for several types of risers and sleeves are described. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

Aleshechkina, O.M., G.A. Ravich, R.G. Solov'yeva, and G.N. Yakinovich.

Increasing the Yield of Suitable Castings by Preheating Risers With the Aid of Exothermic Mixtures

3

Shportenko, P.I. Exothermic Mixtures Used for Heating Risers of Nonferrous Castings

24

Nasankin, A.F., and B.K. Dymchin. Preheating of Risers With Exothermic Mixtures

32

AVAILABLE: Library of Congress (TS236.M77)

Card 2/2

VK/pw/gap
8-30-60

RAVICH, G.A.; MOROZ'KO, G.V.

Casting large machine parts of mixed steels. Lit.proizv.no.1:1-3
Ja '57. (MIRA 10:3)

(Steel castings) (Foundry machinery and supplies)

RAVICH, G. A.

USSR/Engineering - Foundry, Gating

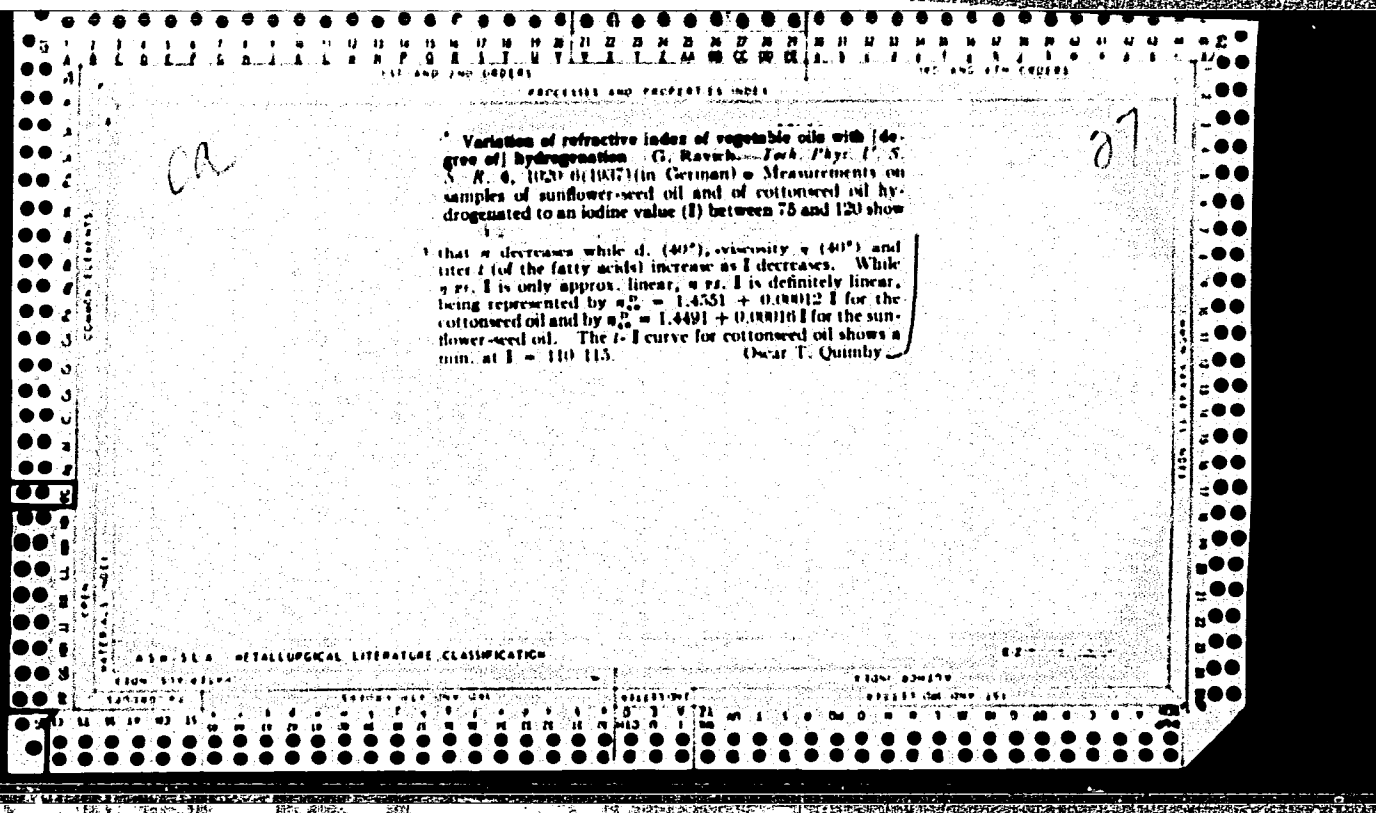
Dec 51

"New Method for Calculating Gate Systems," G. A.
Ravich, P. S. Yashin, Engineers, Kramatorsk Plant
imeni Ordzhonikidze

"Litey Proizvod" No 12, pp 21-23

Analyzes process of metal movement in gate system,
demonstrates inaccuracy of existing formula for
calc gate systems and develops new formula which
depicts more precisely actual conditions of filling
mold with metal. Method permits dimensional detn
of all components of gate system including skimming
gates.

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RAVICH G-2

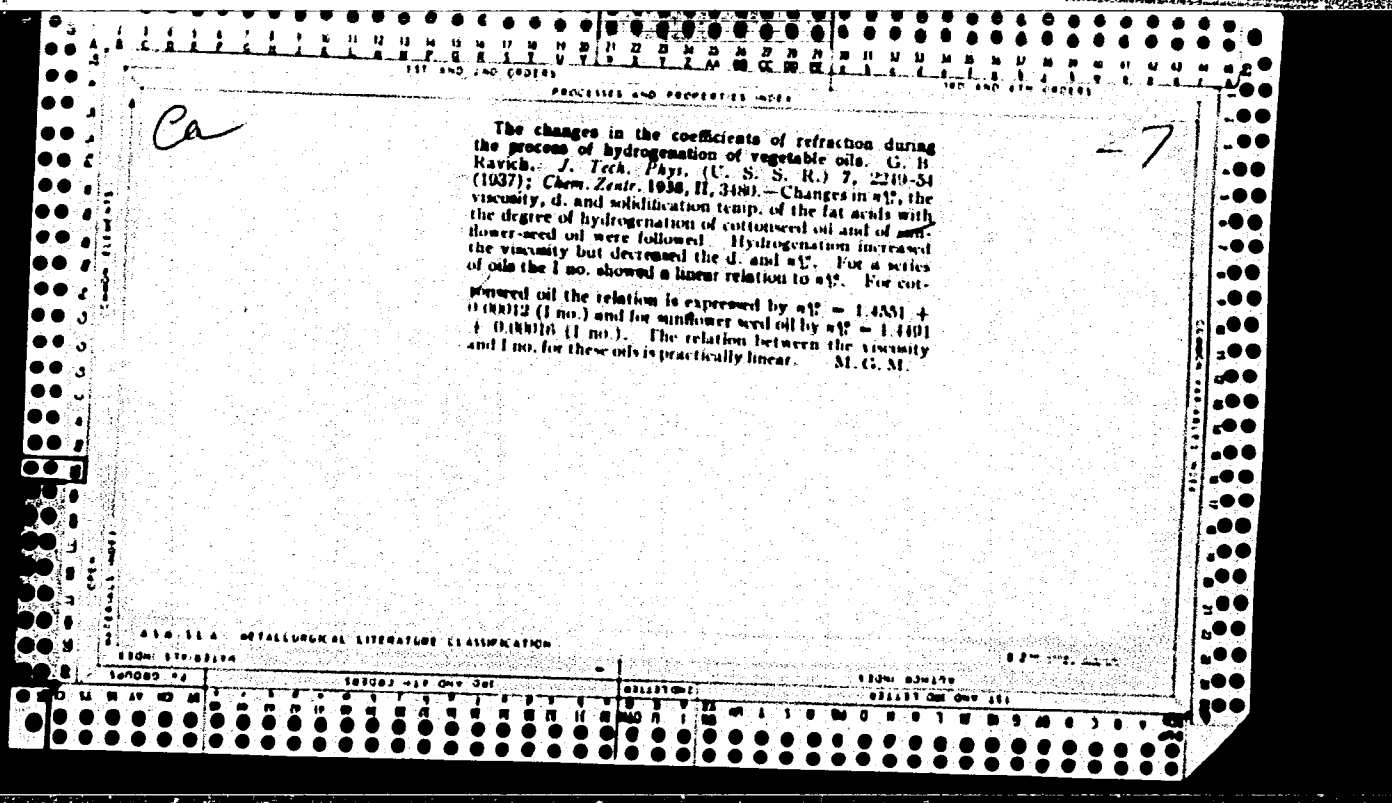
A57

2449. Dependence of Viscosity and Density of Fats and Fatty Acids on Iodine Number. O. S. Bortnick. *Acta Physicochimica* U. S. pp. 806-812, 1957. In German.—The viscosities of oleic, stearic and lauric acids (iodine numbers 0, 86 and 170 respectively) over the range 20°–80° C. show a linear decline of viscosity with increasing iodine number, the isotherms intersecting at a common point. The densities of the same compounds increase with increasing unsaturation. Measurements of viscosity and density at intervals during the hydrogenation of a mixture of cotton seed and linseed oils also show a regular change in these properties with higher number. Hence viscosity measurements, in particular, can be used to determine the course of such reactions. L. V. C.

ASO-11A METALLURGICAL LITERATURE CLASSIFICATION

SECTION

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METALLURGICAL LITERATURE CLASSIFICATION																									
1. SOURCE													2. SUBJECT												
3. ABSTRACT													4. SUMMARY												
The changes of the physicochemical characteristics in the hydrogenation of vegetable oils. G. B. Raysh, <i>Stroisk. Nauch.-Issledovatel. Rabot. Voenyuz. Akad. Pishchev. Prom. im. Stalina</i> 2, 158-65 (1959); <i>Khim. Referat. Zhur.</i> 1959, No. 8, 124; cf. <i>C. A.</i> 34, 2821. The changes of the η, n, d, and I no. of cottonseed and sunflower-seed oils during hydrogenation were investigated. The η of pure linoleic, oleic and stearic acids decreased linearly with increase in unsat., as expressed by the I nos. An increase of the η and a decrease of the d of the hydrogenated oil were observed during the hydrogenation of the sunflower-seed and the cottonseed oils. The dependence of the η and the d on the I nos. is expressed linearly. An approx. linear relationship was found between n and the I no. The change of titer during hydrogenation has no such uniform relation to the change of I no. as have the changes of η and n. W. R. Henn																									

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PROCESSES AND PROPERTIES INDEX

Viscometric determination of the degree of unsatura-
tion of fat acids. G. H. Mavich. *Colloid J. (U. S. S. R.)*
5, 13-27 (1949); cf. *C. A.* 32, 3178; 33, 3213. —If the
viscosities of stearic, oleic, linoleic and linolenic acids and
of some of their mixes. are plotted against the I values,
straight lines are obtained. The η values between 20°
and 120° were detd. or extrapolated. An equation is
proposed for the relation between η and temp.
J. J. Hackettman

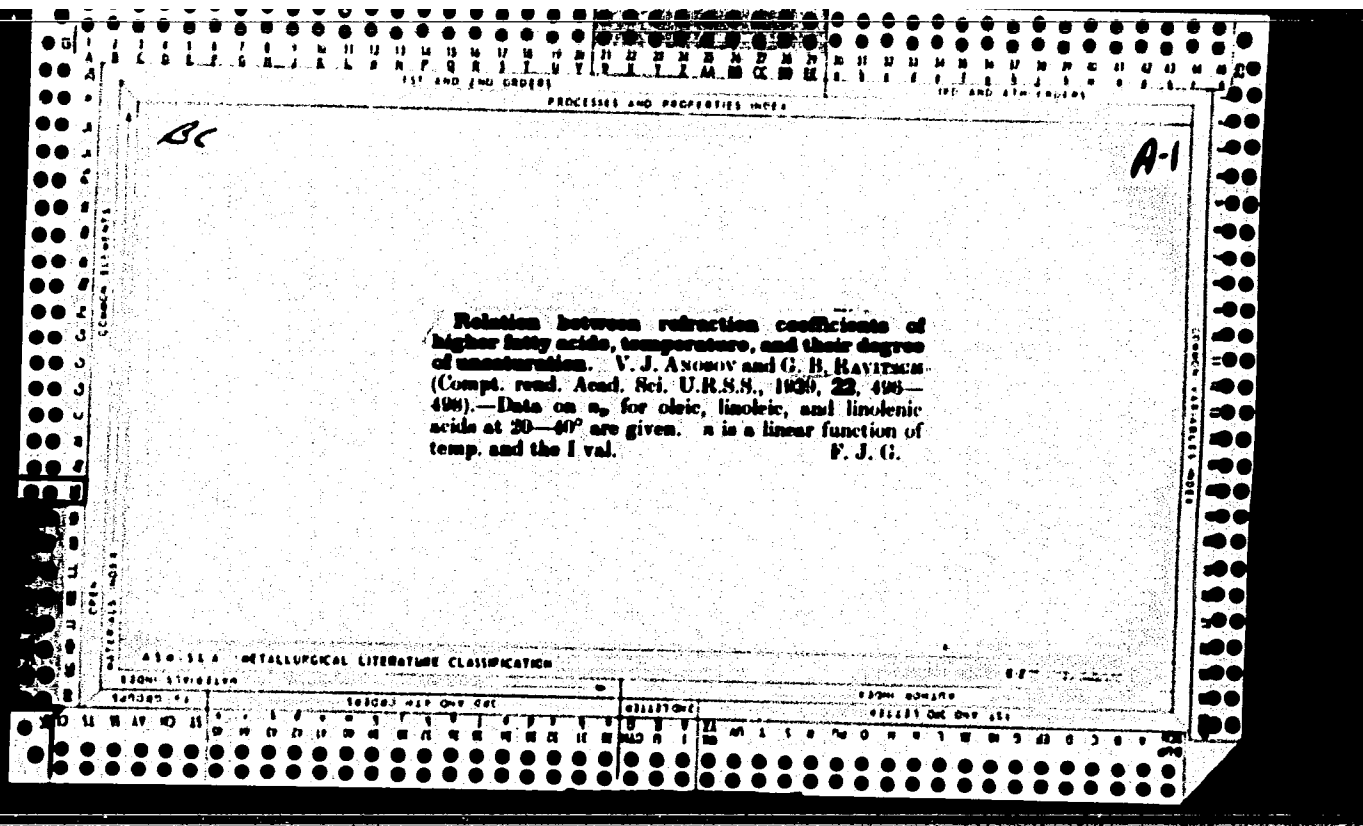
ALSO SEE METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS
 PROCESSES AND PROPERTIES INDEX
 3RD AND 4TH ORDERS

H-1

Dependence of viscosity of long-chain fatty acids on temperature and degree of unsaturation. (J. B. FAYEN, Compt. rend. Acad. Sci. U.S.S.R., 1955, 22, 34-38).—For C_{18} acids the viscosity decreases linearly with increasing I val. A general equation for the effect of temp. is given, and data in agreement for a no. of C_{18} acids are recorded.
 L. J. J.

450-554 METALLURGICAL LITERATURE CLASSIFICATION
 450-554 METALLURGICAL LITERATURE CLASSIFICATION
 450-554 METALLURGICAL LITERATURE CLASSIFICATION



17-1

Activation energy and heat of melting of fatty acids and triglycerides calculated from temperature solutions of viscosity. M. P. VOLANOVICH and G. B. RAYSON (Compt. rend. Acad. Sci. U.R.S.S., 1969, 239, 252-255).—An attempt has been made to apply the equation $\eta = A e^{B/T}$ (where A , B , and E are const.) to the data obtained previously (A., 1968, 189) for the higher fatty acids and triglycerides (I) of varying degree of saturation. Fatty acids in the liquid state show no change in co-ordination no. of units within the temp. range 20–110°. For (I), an increase in co-ordination no. of units occurs on raising the temp., owing to the smaller influence of directed forces, and fatty acids and (I) are regarded as mol. liquids with a OH or H bond. In contrast to Ward's results (A., 1967, I, 125), the heats of melting L for fatty acids are found to be $> B$, the activation energy. Comparison of L and B for (I) cannot be made because of the lack of reliable value of L .

W. R. A.

1ST AND 2ND PERIODS										3RD AND 4TH PERIODS									
PROCESSES AND PROPERTIES INDEX																			
RAVICH, G. B. (a) 2 The polymorphism of the unsaturated fat acids containing eighteen carbon atoms. G. B. Ravich, V. A. Volhova and T. N. Kuz'mina. <i>Compt. Rend. Acad. Sci. U. R. S. S.</i> 20, 88-90(1960)(in German).—As part of a study of the polymorphism of unsatd. fat acids contg. 18 C atoms, a sample of pure oleic acid was examd. by means of cooling and heating curves, and by means of protracted crystn. The effects of adding small quantities of palmitic and stearic acid were examd. by the same means. With the customary rates of cooling and heating only one crystn. point (8.9°) and only one m. p. (9.9°) were found. With an extremely small rate of cooling, 2 crystn. points (11° and 8.5°) were discovered. J. Kaye																			
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 Viscosity Investigation of Higher Fat Acids and Waxes. G. H. Ravich. *Acta Physicochim. U. R. S. S.* 17, 55-72 (1942). The following questions are considered:

The dependence of the viscosity of fat acids with 18 C atoms on temp. and on the no. of double bonds per mol. (degree of unsat. as characterized by the I no.), the correlation between differences in the temp. dependence of the internal friction of triglycerides and fat acids and the structure of these compounds, anomalies in the viscosity of natural, hydrogenated and polymerized fats. The Ubbelohde type of viscometer is used throughout and the accuracy is given as 0.5%. The viscosities of the fat acids are linear functions of the I no., the coeff. decreasing with increasing I no. The dependence upon temp. can be represented by means of a relation developed first by Pecher (cf. *C. A. 39*, 2083). The following final equation is proposed: $\eta = \eta_0 10^{A-4} - K_0 10^{A-4} T$, where η_0 is the viscosity at a temp. T and T is the I no. The parameters have the following values: $\log \eta_0 = -2.13$, $c = 720$, $b = -182$, $\log K_0 = -10.59$, $c = 6053$, $b = -680$. Logarithmic plots of the viscosity vs. T^{-1} for 9 compounds give straight lines, contg. in some cases a break in between. From a comparison of the activation energies for flow and the heats of fusion following the concepts of Bernal and Fowler (cf. *C. A. 37*, 5232) and Ward (cf. *C. A. 31*, 2887), it is concluded that these systems represent mol. liquids hydrogen-bonded in the same way as HOAc. Evidence obtained by other methods for their structural characteristics is cited. The change of the above-mentioned activation energies with temp. in the

case of glycerides is ascribed to large changes in co-ordination no. The absence of the "active" H of the COOH group excludes the possibility of stable H bonds in this case. Work on the viscosity of fats is continued. Data at 20° for hydrogenated cottonseed oil showed a decrease of viscosity from 76 to 87 centipoises upon increase of the capillary pressure from 42 to 1000 mm. H₂O. This effect becomes less pronounced with increasing pressures. Above about 2000 mm. H₂O practically no change occurs. The flow cessation of oil irradiated with ultrasonic waves are investigated. Cotton oil treated for 90 min. exhibits no viscosity change upon pressure increase from 440 to 1000 mm. H₂O. Treatment for 120 min. gives a pronounced effect. Besides, the viscosity assumes values roughly five to three and a half times as large as the samples treated for 90 min. Working at still higher pressures (2000 mm. H₂O for cotton oil) Newtonian flow is obtained. The temp. dependence follows an exponential law expressed as: $\eta = [c/\log (\eta/\eta_0)] + b$, with $c = 325.5$ and 851.3 for 90 and 120 min. of irradiation, resp., $b = -68.5$ and -98.5 and $\log \eta_0 = 2.69$ and 4.95. 44 references.

Robert Simha

CA

PROCESSES AND PROPERTIES INDEX

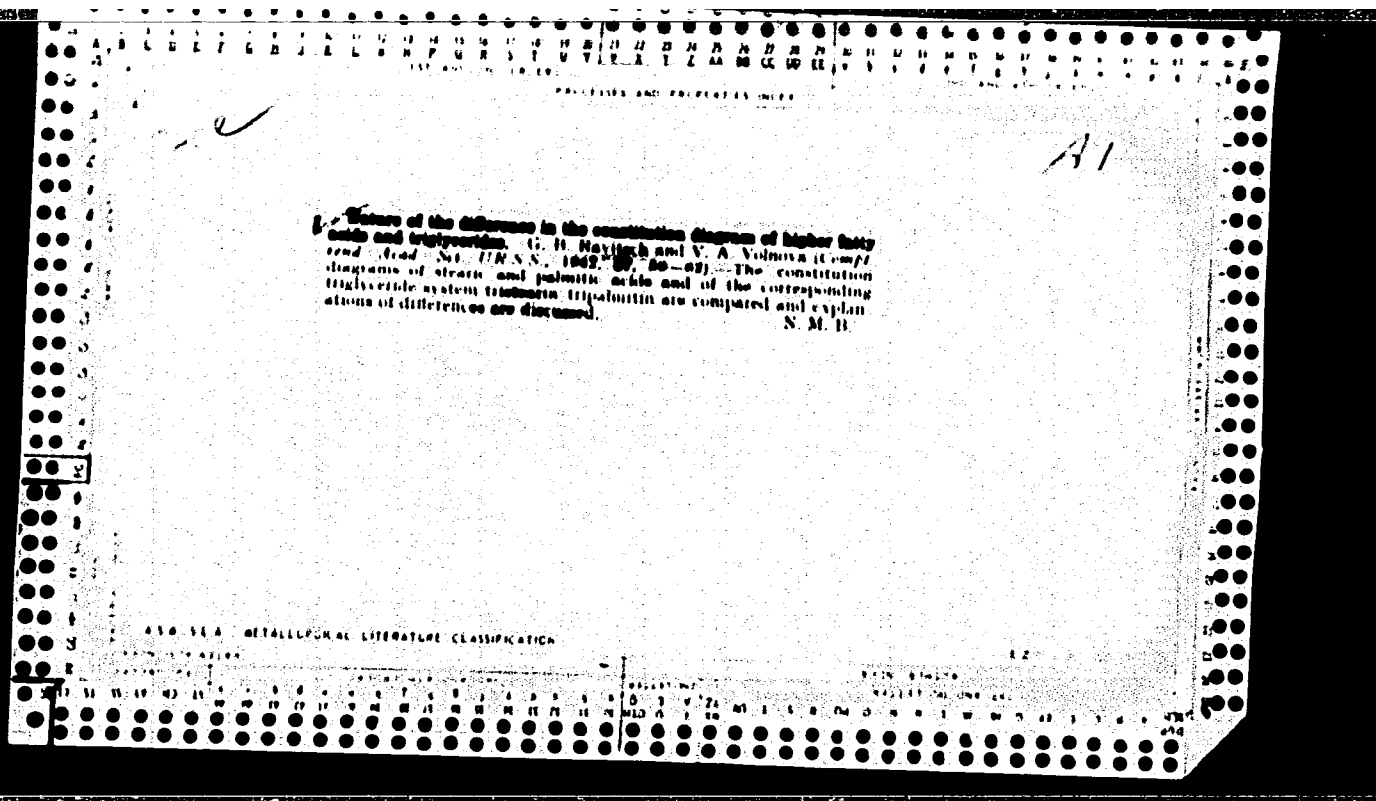
2

The nature of the difference in the character of the phase diagrams of the higher fatty acids and corresponding triglycerides. G. B. Ryzhik and V. A. Valnova. *Acta Physicochim. U. R. S. S.* 17, 288-30(1942)(in English).—The behavior of the systems stearic acid-palmitic acid (I), and tristearin-tripalmitin (II) were studied by means of their m. po., hardness, microstructure and viscosity. The results of exper. data show that in the system I a stable mol. compd. is formed giving limited solid solns. with both components. In system II the mol. compd. formed yields continuous solid solns. and is unstable. In system I the mol. compd. formed is believed held together by H-bridge bonds. The system II disintegrates because of transformation of one component to a higher-melting form. F. H. Rothmann

ASD-564 METALLURGICAL LITERATURE CLASSIFICATION

80000 810000 820000 830000 840000 850000 860000 870000 880000 890000 900000 910000 920000 930000 940000 950000 960000 970000 980000 990000

80000 810000 820000 830000 840000 850000 860000 870000 880000 890000 900000 910000 920000 930000 940000 950000 960000 970000 980000 990000



Nature of the difference in the character of the phase diagrams of the fatty acids and corresponding triglycerides. G. B. Ravitsch and V. A. Volnova (Acta Physicochim. U. R. S. S., 1942, 27, 333-336).--Various physical properties of the systems stearic acid-palmitic acid and tristearin-tripalmitin have been examined and the phase diagrams of the systems have been compared. In the acid system a mol. compound is formed giving limited solid solutions with both acids. If it is assumed that it is the H bond which enables mol. compounds to be formed, then the absence of CO₂H groups in the triglyceride systems explains why a similar mol. compound is not formed in this system. On the other hand continuous solid solutions are formed which disintegrate with time as a result of the transformation of one of the triglycerides into a more stable form with a higher m.p. G. R. S.

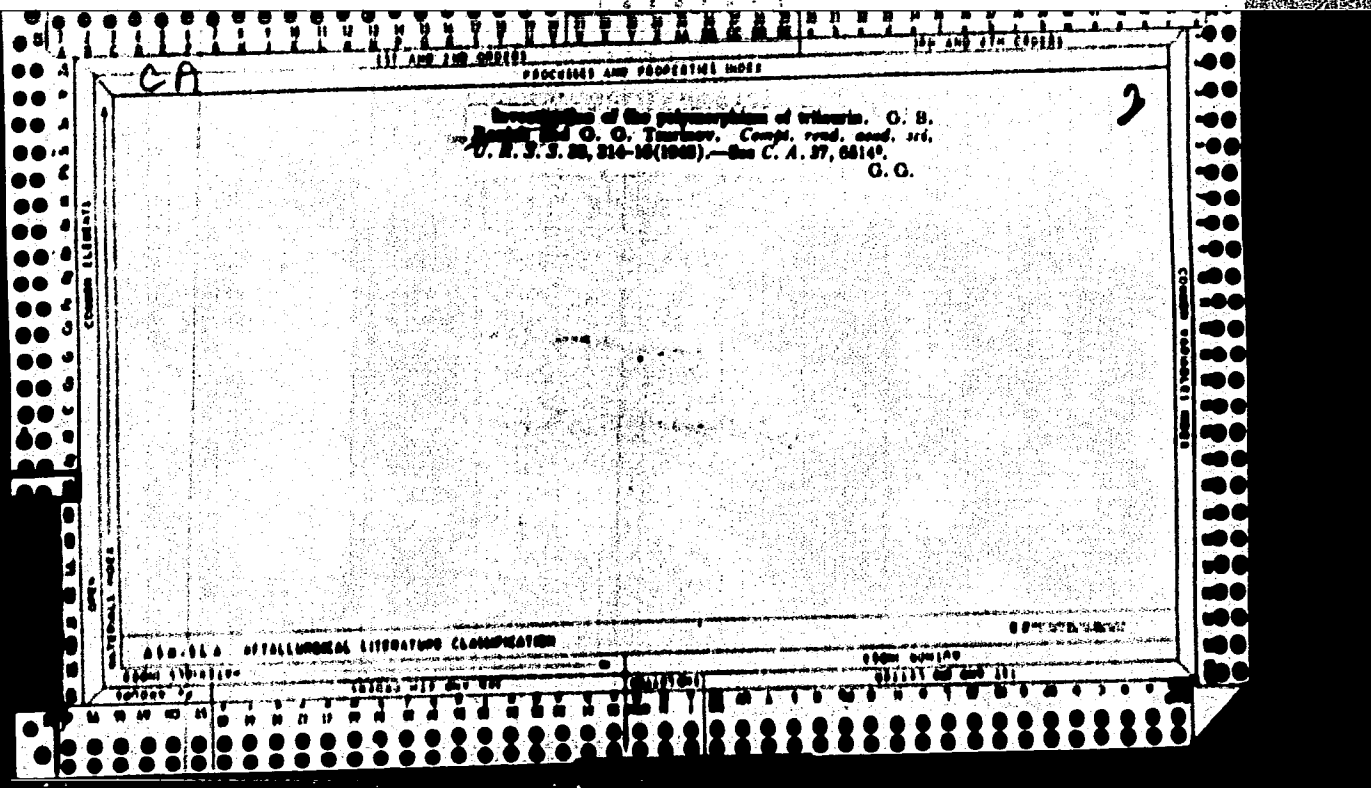
BC

A-1

Heating curves of triolein. G. B. Ravishank (Compt. rend. Acad. Sci. U.R.S.S., 1965, 22, 275-277). [Direct and differential heating curves, recorded automatically, show that triolein (I) cryst. from a melt and kept for 72 hr. shows thermal effects at 53-65° not given by specimens examined immediately after rapid crystallization. No definite thermal effects are observed at 18-45°. The bearing of the results on polymorphism in (I) is discussed (cf. also A., 1954, 780). A. J. H. W.]

450-514 METALLURGICAL LITERATURE CLASSIFICATION

CIA-RDP86-00513R0014443



CA		10	
POLYMERIZATION AND PROPERTIES INDEX			
Polymorphism of higher monoacid triglycerides. G. I. Ravich, G. G. Tourinov, V. A. Vidurva, and N. P. Petrov. <i>Dokl. akad. sci. U.R.S.S. Classe sci. chim.</i> 1965, 581-6 (in English, 588); <i>Acta Physicochim. U.R.S.S.</i> 21, 101-8 (1966); <i>Comp. rend. acad. sci. U.R.S.S.</i> 51, 209-72. Three polymorphic forms of trilaurin were discovered by microcinematography: the stable δ form, m. 46.5°, which is best obtained from the melt by slow growth at 30-40°, the metastable α-form which is obtained below 25°, and the vitreous γ-form which was obtained by rapid cooling to 4°. Transition curves for the α- and δ-forms are given, and dependence on temp. of the rate of transformation of the α- into the δ-form was detd. Oscar W. Baur			
610-518 METALLURGICAL LITERATURE CLASSIFICATION			
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2

Thermal investigation of one-component systems formed by the higher monosacid triglycerides. II. G. I. Lavich and G. G. Tsurinov (Kurnakov Inst. Gen. Chem., Moscow). *Acta Physicochim. U.R.S.S.* 21, 321-34 (1946) (in English); cf. C.A. 40, 60535.—Thermal analysis leads to the conclusion that higher monosacid triglycerides with an even no. of C atoms exist in 3 polymorphic modifications—the α, β, γ phases. The following m.p.s. were found: palmitin β 46.5°, α 35.5°, γ 15-20°; tripalmitin β 67.5°, α 55-60°, γ 45-48°; tristearin β 69.5°, α 52°, γ 48.5°; trilinolein β -10.5°, α -27 to -29°, γ -19 to -44.5°. Tristearin used contained some tripalmitin. Trilinolein has so far been considered dimorphic. The modifications form a thermal series of crystals, in which the degree of stability of the phases increases with the no. of m.p.s. The metastable phases transform to the stable β -phase in accordance with the Ostwald rule.

Oscar W. Bauer

ASD-SLA METALLURGICAL LITERATURE CLASSIFICATION

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130

41

Polymorphism of the higher monosaccharide triphosphates. G. H. Ravitskiy, V. A. Volnova, and G. G. Taurinov (*Compt. rend. Acad. Sci. U.R.S.S.*, 1946, **81**, 369-372).—Tammann curves for triphosphates have been constructed from data obtained by means of motion-picture micrography, representing the linear rates of growth and the increase in the no. of centres of crystallisation of both the unstable α -(I) (m.p. 33-5°) and the stable β -(II) (m.p. 46-47°) over the temp. range 48-0°. From 48.5° to 36° β -(II) ppt. with a small no. of centres of crystallisation and a small linear rate of growth, both of which increase over the range 36-22°. Above 22° the transition of any α -(I) which ppt. is rapid, but below this temp. lies the optimum zone of growth of α -(I). The sharp increase in the no. of centres of crystallisation and the decrease in the linear rate of growth of α -(I) in the region 20-15° has led many workers to infer, erroneously, the appearance of a crust, γ -(III) at these temp. Under selected conditions vitreous γ -(III) has been prepared; it had none of the optical properties of crystals. H. R. C.

6A 27

Solid solutions of higher fatty acids and triglycerides.
N. N. Efremov, G. B. Rayish, and V. A. Vol'nova.
Izv. Sib. Nauch. Ts. Khim. Anal., Inst. Obshch. i Neorg. Khim., Akad. Nauk S.S.S.R. 10, No. 3, 142-55 (1948).—
The systems stearic acid-palmitic acid and tristearin-tripalmitin were subjected to thermal analysis, microstructure, hardness, and efflux pressure studies. The thermal analysis was carried out in a Kurnakov differential pyrometer by using for comparison paraffin oil for cooling curves and MgO for heating curves. The microstructure was studied in direct and reflected light. The progress of crystal. was microinsured. The hardness was detd. by Brinell method with a 2-mm. ball and 0.3-kg. load. The efflux pressure was detd. in a Gagarin press. At a rapid cooling rate the system stearic-palmitic acids formed a continuous row of solid solns. At a slow cooling rate mol. compds. were formed. The latter combined with the components of the system to form some solid solns. Microstructure studies revealed a eutectic at 70% of palmitic acid. The mol. compd. of stearic-palmitic acids is formed by virtue of H bonding. The triglycerides have 3 similar temp. compn. curves each within a different temp. range. The curves of compn. hardness of the triglycerides system depended on the rate of cooling. The solid solns. formed within this system partially decompd. with time. The solid solns. with up to 30% of tristearin were more stable than the other. The triglycerides did not form mol. compds. M. Hensch

Investigation of nonequilibrium states in systems formed by aliphatic compounds. G. B. Davydov, N. A. Vol'mova, and G. G. Tsvetkov. *Izv. Akad. Nauk S.S.S.R. Khim.*, 1961, 1961, (1961) 1961, *Chem. Abstr.*, 1962, 57:13, 13, 2214 (1962).—studies were made of the nonequilibrium states of the triglycerides stearin, triolein, tristearin, and triolein. The nonequilibrium curves of the acids had a clearly defined minimum, indicating the formation of a mol. compd. Analogous curves for the triglycerides were characteristic for solid soles. The internal friction maximum for the system stearic-palmitic acids had a maximum, which is another indication of the existence of a mol. compd. The curves for the triglycerides had no maxima, regardless of the rate of cooling. M. Hensch

USSR/Chemistry - Stearic Acid
Chemistry - Isotherms

May 49

"Temperature Dependency of the Rate of Polymorphic Conversion of Stearic Acid Monocrystals," G. B. Ravich, and V. A. Vol'mova, Inst of Gen and Inorg Chem imeni N. S. Kurnakov, Acad Sci USSR, 24 pp

"Dokl Ak Nauk SSSR" Vol LXVI, No 3

In connection with theoretical and applied significance of polymorphic conversions of aliphatic, long-chain compounds, isotherms of conversion for stearic acid monocrystals are determined in temperature range 45-69°. Special study is needed on nature of conversion established. Submitted by Acad G. G. Urazov, 23 Mar 49.

52/49T24

2

Thermographic investigation of long chain aliphatic compounds. A. G. Anikin and G. B. Ravich. *Doklady Akad. Nauk S.S.S.R.* 28, 309-11(1969). Triglycerides or higher aliphatic acids are crystal. in a thin layer directly in a microthermocouple, made of 0.05 mm. wire and having a loop instead of the usual junction. The couple with the substance, and a similar blank thermocouple, are placed between 2 slides, in a way ensuring max. thermal insulation from surrounding objects. This procedure permits simultaneous thermal and microscopic examn. of samples of the order of a few tenths of a mg. The method was tested by blank expts., which gave no indication of any thermal effects, then with triolein, which gave heating curves identical with those obtained by macromethods.

N. Thon

C. A.
1951

General and Physical Chemistry
2

The existence of a β' -phase in higher monosodic tri-
glycerides. G. B. Ravich and E. G. Voronova. *Doklady*
Acad. Nauk S.S.S.R. 77, 1035-7 (1951).—Thermal anal-
ysis of carefully purified tripalmitin gives an induction
at 46.5°, corresponding to melting of the γ form, and an in-
duction at 54-55.5°, corresponding to solid transformation of
 α into β' . A temp. hold at 61° appears to be the trans-
formation of β' into β . The study of dilution of the sample
on heating readily showed a total of 3 changes: 54°, 55.5°,
and 65.8°. The results show the existence of 4 phases:
glassy γ form, metastable cryst. α and β' phases, and stable
cryst. β phase. Photomicrographs of specimens are shown.
G. M. Kuznetsov

RAVICH, G.B.

Ravich, G. B., and Teurlinov, O. G.: Fazovaya struktura
i prevrashcheniya organicheskikh veshchestv
v tverdom sostoyanii (Phase Structure of Triglycerides,
Transformations of Organic Compounds in the Solid State),
Moscow: Izdatel'stvo Akad. Nauk S.S.S.R., Inst. Gen.
and Inorg. Chem. 1952. - 137 pp.

RAVICH, G.B.

Viktor Iakovlevich Anosov; 60th anniversary of his birthday and 35th anniversary of his scientific and pedagogical activities. Izv.Sekt.fiz.-khim.anal. 21:10-13 '52. (MLBA 6:7)

(Anosov, Viktor Iakovlevich, 1891-)

RAVICH, G. D.

Chemistry, Analytical

Significance of the time factor in the physico-chemical analysis of systems consisting of
organiz substances. Usp. khim. 21 No. 9, 1952.

Monthly List of Russian Accessions, Library of Congress, December 1952. Unclassified.

CP 2

Normal investigation of phase transitions of sodium and potassium salts of higher fatty acids. G. B. Ravich and N. A. Noshitko. *Doklady Akad. Nauk S.S.S.R.* 117-21 (1962).—Differential thermograms were detd. for pure Na and K laurate, myristate, palmitate, and stearate. Drying conditions of the freshly crysd. soap have an effect on the thermogram; thus, with K palmitate, there is a difference of the portions of the thermogram between 40° and 70° depending on whether the soap has been dried at 106° or over CaCl₂. The portion of the thermogram between 70° and 270° is independent of the method of drying, provided the rate of heating is the same. In the series of the Na soaps, the mol. wt. has very little effect on the phase transitions. All the Na soaps exhibit 7 homogeneous groups of phases. In the series of K soaps, there is a shift of the phase transition temps. with increasing mol. wt., and a change of the character of the thermogram. Na and K soaps of the same fatty acid differ in both the no. of phases and the transition temps. Anhyd. K soaps melt higher than the corresponding Na soaps.

N. Thon

Ravich, G.B.

62 ✓ Pressure extrusion of sodium and potassium salts of higher fatty acids. G. B. Ravich and N. A. Nechitallo. *Doklady Akad. Nauk S.S.S.R.* 87, 69-72(1982); cf. 46, 84918. —The soaps were forced through a tapered cylindrical channel which was 2 mm. in diam. at the exit. Graphs of cylinder displacement as a function of pressure for Na soaps at 18° and 90° (laurate at 80°) showed a preliminary linear portion followed by a plateau at almost const. pressure. The specific discharge pressures corresponding to this plateau at 18° and 90°, resp., were: Na laurate 420, 110; myristate 510, 210; palmitate 350, 150; stearate 222, 40; oleate 106, —, kg./sq. cm. The extruded soaps were coherent at 18° and crumbly at 90°, except the oleate which at 90° had the consistency of Vaseline. The curves for the K soaps were somewhat different. The graph of cylinder displacement as a function of pressure at 18° showed a hump on the preliminary rising part of the curve (except for palmitate), with a slight max. for laurate. At 70°, all the curves showed a preliminary linear portion rising to a max. followed by a horizontal portion. The specific discharge pressures at 18° and 70°, resp., were: K laurate, 1200, 120; myristate 880, 65; palmitate 650, 60; stearate 550, 42. The extruded K soaps were coherent at 18°.

R. T. Myers

(1)

BEZZUPOV, I. F., Eng.; VOL'NOVA, V. A.; RAVICH, G. B.

Olein.

Obtaining industrial olein without pressing and its physical-chemical properties.
Masl. -zhir. prom. No. 1, 1953.

SO: Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.

KUPCHINSKIY, P.D., kandidat tekhnicheskikh nauk; STERLIN, B.Ya.

kandidat tekhnicheskikh nauk [reviewers]; RAVICH, G.B.; TSURINOV,

APPROVED FOR RELEASE. Tuesday, August 01, 2000 — CIA-RDP86-00513R001444-3

On G.B. Ravich and G.G. Tsurinov's book "Phase structure of tri-
glycerides." P.D. Kupchinskii, B.Ia. Sterlin. Masl.-zhir.prom. 18
no.11:24-25 '53. (MLA 6:12)

(Glycerides) (Ravich, G.B.) (Tsurinov, G.G.)

RAVICH, G.B.

3

p-Dichlorobenzene polymorphism. G. B. Ravich and
O. P. Bogush. *Izvest. Sektora Fiz.-khem. anal.*
Nauk S.S.S.R. 23, 306-13 (1953).—p-Dichlorobenzene was
heated considerably above its m.p. and then rapidly im-
mersed in liquid N. The solidified product was then sub-
jected to thermal analysis; thus a differential heating
curve was obtained. This curve indicates the existence of 5
modifications of $p\text{-C}_6\text{H}_4\text{Cl}_2$, the transition points of which
are: -18 to -10 , $+5$ to $+7$, 39 , 49.5 , and 53.5° .
M. Hosh

RAVICH, G.B.

The melting in stages of sodium and potassium salts of higher fatty acids. G. B. Ravich and N. A. Nechitailo. *Izv. Akad. Nauk SSSR, Khim.* 1953, 314-25 (1953).—"Stage melting" is defined as the combined successive transitions of cryst. and liquid-cryst. phases observed when soap is heated. In this investigation were studied the phys.-chem. properties of Na and K salts of higher fatty acids (soaps) and the effects of the length of C chain, nature of cation, and presence of double bonds on these properties. The salts studied were Na and K laurate, myristate, palmitate, stearate, and Na oleate. The salts were recrystd. from alc., dried at 105°, and subjected to thermographic analysis. All of the Na compds. except laurate had 6 phases, the 7th being isotopic liquid. Na laurate had one addnl. phase. The phase-transition temp. limits of all these compds. were very similar and were not affected by the mol. wt. of the compd. The temp. of transition to an isotopic liquid, m.p., increased as the mol. wt. decreased. The thermogram of Na oleate had the same no. of stops but its shape was different. The thermograms of the K compds. differed from those of the Na salts in the no. of phases and the transition temps. The resemblance of the K salt thermograms to each other is much less pronounced than is that of the Na salt thermograms. The transitions, both of the Na and K salts, were reversible. The degree of precooling (prior to recording of the thermogram) and the rate of heating affected the phase structure, particularly of Na oleate. M. Hosh

RAVICH, G.B.; FROLOVA, A.A.

Thermic investigation of reactions in the production of
phenolformaldehyde resins. Izv.Sekt.fiz.-khim.anal. 23:326-333
'53. (MLRA 7:1)

1. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova
Akademii nauk SSSR.
(Resins, Synthetic) (Formaldehyde) (Phenols)

Handwritten: Ravich, G. B.

The polymorphism of *p*-dibromobenzene. G. B. Ravich
and O. F. Bogush. *Doklady Akad. Nauk S.S.S.R.* 89,
513-14(1953); cf. *C.A.* 48, 9137a.—Three polymorphic
forms of *p*-dibromobenzene (I) were found. One form
exists from 0° to 40°, one form appears at 70°, and the
stable form appears at 80.5°. Samples of I were purified
by recrystn. from EtOH and by sublimation. The samples
were heated above the m.p., plunged into liquid N and the
heating curves plotted as the samples were heated fairly
rapidly. The recrystd. sample did not show the 0-40°
form. Microscopic examn. of a monocrystal using polarized
light and a heated stage also revealed the 70° transition.
Joseph B. Levy

62

①

USSR/Chemistry - Plastics

21 May 53

"Thermal Investigation of the Reaction for Obtaining Phenol-Formaldehyde Resins,"

G. B. Ravich and A. A. Frolova

DAN SSSR, Vol 90, No 3, pp 391-394

Investigated the condensation process of phenol-formaldehyde resins at the transition stages between resol and resite structures. The results permit an accurate differentiation between the endothermic and exothermic effects of the process which accompany or bring about the transition process. Presented by Acad G. G. Urazov, 31 Mar 53.

260T/2

RAVICH, G.B.

First works of N.S.Kurnakov on the physicochemical analysis of organic substances. Izv.Sekt.fiz-khim.anal. 24:5-15 '54. (MIRA 8:4)

1. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova Akademii nauk SSSR.
(Chemistry, Organic) (Kurnakov, Nikolai Semenovich, 1861-1941)

RAVICH, G.B.; VOL'NOVA, V.A.; TSURINOV, G.G.

Use of N.S.Kurnakov's pyrometer in the study of low-temperature phase conversions with microquantities of the substance. Izv.Sekt.fiz.-khim. anal. no.25:41-51 '54. (MIRA 8:5)

1. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova
Akademii nauk SSSR.
(Pyrometers) (Thermochemistry)

Ravich, G.B.

✓ Microstructure of sodium and potassium salts of higher fatty acids. N. A. Nechitailo, G. G. Taurinov, and G. B. Ravich. *Izv. Sib. Nauch. Ts. Khim. Anal., Inst. Obshch. Khim. Akad. Nauk S.S.S.R.* 25, 387-94 (1954).
Microstructures of Na stearate and palmitate are identical. Polymorphic forms, found close to temps. of phase transition, are characterized by similar microstructures. The general type of microstructure of Na myristate is very close to that of Na palmitate and stearate. The microstructure of Na laurate is different, having more elongated chains. For all Na soaps of natd. fatty acids the isotropic liquid phase and the liquid-cryst. phase sepp. from it are identical. For these phases the growth of so-called conical structure is characteristic. For Na oleate the difference of phases is noted only by change of color of a microsection. At the highest temp. of the liquid-cryst. phase a change of structure is observed. For all K soaps a difference of microstructure is characteristic. All Na and K soaps are characterized by formation of watery crystals of sym. type as a result of high-temp. phase transition. Electron microscopic photographs of the fibrous structure of Na stearate, palmitate, myristate, and laurate show that the width of the fibers decreases in going from Na laurate to Na stearate, that for Na stearate and palmitate the presence of a combination of interwoven fibers and ball-like aggregates is characteristic, that the structure of Na myristate and laurate is characterized less sharply by binding of fibers, and that for Na palmitate 2 types of structure are obtained depending on the concn. of the soln. used for obtaining the fibers. Eurilla Mayerle

NA
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②

RAVICH, G.B.

Works of N.N.Mfremov on the physicochemical analysis of organic substances. Izv.Sekt.fiz.-khim.anal. 27:15-22 '56. (MIRA 9:9)

1. Institut obshchei i neorganicheskoi khimii imeni N.S.Kurnakova AN SSSR.
(Chemistry, Analytical) (Mfremov, Nikolai Nikolaevich, 1886-1947)

RAVICH, G.B.

Phase transformations in normal paraffin hydrocarbons
with long chains: N. A. Nechitallo and G. B. Ravich,
Uspekhi Khim. 26, 640-68 (1957).—A review, covering the
thermochemistry of phase transitions among alkanes, in-
cluding the binary systems; 89 references. G. M. K.

DM

DR 0016

AUTHORS: Ravich, G. B., Yegorov, B. N.

SOV/20-122-2-23/42

TITLE: A Study of the Polymorphism of N-Ethyl-3,4-Dinitropyrrole
(Issledovaniye polimorfizma N-etil-3,4-dinitropirrola)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 2,
pp 250 - 253 (USSR)

ABSTRACT: The authors investigated **several methods** for the phase analysis of the polymorphism of a pure sample of N-ethyl-3,4-dinitropyrrole. The preparation was examined by means of differential-thermal analysis and systematic dilatometric investigations. The evidences verified the existence of 3 reversibly convertible modifications of this compound. Form III with the lowest temperature was reversibly transformed to form II at 54 - 56° (Fig 1a), the latter into form I at 74-76°. From the type of the differential-thermal curves the transformation I → II was not substantiated with quick cooling, whereas the transformation II → III became distinct. It was striking that the total effect of the heat absorption in the transformations III → II and II → I in the thermal curve is

Card 1/3

A Study of the Polymorphism of N-Ethyl-3,4-Dinitro-
pyrrole

SOV/20-122-2-23/42

very close to the absolute value of the opposite (exothermic) effect in the temperature range of the transformations of the modifications $II \rightarrow III$. Thus, the differential-thermal analysis recorded an essential shifting of temperature in the phase transformation $I \rightarrow II$ (as compared with the temperature $II \rightarrow I$), according to the conditions of cooling and the history of the sample. The above temperature hysteresis in the phase transformation $I \rightarrow II$ became especially evident in the dilatometric curves which have been obtained both, visually and by automatic recording. Figure 3 shows a temperature curve and a dilatometric curve. Heating was performed from room temperature nearly up to the melting point. Afterwards the sample was cooled. Both with the heating and with the cooling phase transformations and the ranges of the phase existence are seen. They were in accordance with the results of the differential-thermal analysis (Fig 1). It was seen from the dilatometric curves that the reversible phase transformations were accompanied by a considerable enlargement of the linear dimensions, in particular with the transformation

Card 2/3

A Study of the Polymorphism of N-Ethyl-3,4-Dinitro-
pyrrole

SOV/20-122-2-23/42

II $\rightarrow$ I, where it is C.6%. Professor S.S.Novikov had supplied a sample of N-ethyl-3,4-dinitropyrrole. There are 4 figures and 4 references, 4 of which are Soviet.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova
Akademii nauk SSSR (Institute of General and Inorganic
Chemistry imeni N.S.Kurnakov, AS USSR)

PRESENTED: May 4, 1958, by I.I.Chernyayev, Member, Academy of Sciences, USSR

SUBMITTED: April 25, 1958

Card 3/3

NECHITAYLO, N.A.; RAVICH, G.B.

One-component and binary systems of normal paraffinic hydrocarbons. Itogi nauki: Khim.nauki 4:180-207 '59.
(MIRA 13:4)
(Hydrocarbons)

RAVICH, G.B.; VOL'KOVA, V.A.; KUZNETSOVA, N.P.

Separation of organic substances from systems and methods
of determining their purity. Itogi nauki: Khim. nauki 4:
219-236 '59. (MIRA 13:4)
(Chemistry, Analytical) (Hydrocarbons)

RAVICH, G.B.; MOISEYEV, B.M.

Differential-thermal phase analysis. Itogi nauki: Khim.
nauki 4:237-253 '59. (MIRA 13:4)
(Chemistry, Analytical)

RAVICH, G.B.; VOL'NOVA, V.A.

Microthermal phase analysis. Itogi nauki: Khim. nauki 4:
254-264 '59. (MIRA 13:4)
(Chemistry, Analytical)

RAVICH, G.B.; YEGOROV, B.H.

Dilatometric phase analysis. Itogi nauki: Khim. nauki 4:
265-282 '59. (MIRA 13:4)
(Chemistry, Analytical)

87335

S/078/60/005/011/022/025/XX
B015/B060

54700

2209, 1273, 1043

AUTHORS: Ravich, G. B., Yegorov, B. N.

TITLE: Phase Transition of the 2nd Kind in Sodium Nitrate

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 11,
pp. 2603 - 2611

TEXT: The authors studied the conversion of the 2nd kind of polycrystalline NaNO_3 at 160 - 275°C by the methods of linear dilatometry and differential thermal analysis. The specimens were prepared by cold pressing on an MM-4A (IM-4A) testing machine of TsNIITMASH. The dilatometric measurements took place on an arrangement which is schematically shown in Fig. 1 and described in Ref. 11. The absolute thermal expansion caused by the transition of the 2nd kind was found to be 2.1 % (with respect to the volume) (Fig. 1), and the coefficients of the volume increase of NaNO_3 were calculated in the range of the transition of the 2nd kind (Fig. 2). The temperature dependence of these coefficients was established by recording the dilatometric curves by an ЭПМ-09 (EPP-09)

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87335

Phase Transition of the 2nd Kind in Sodium Nitrate S/078/60/005/011/022/025/XX
BO15/BO60

potentiometer (Fig. 4), and about the same values as Kracek's (Ref. 13) were obtained by volumetric dilatometry. The values obtained here by linear dilatometry are higher than those given by Kracek only in the range of the most distinctly marked anomaly of thermal expansion. Since the values given here do not agree with Austin's and Pierce's results (Ref. 10) which were likewise obtained by linear dilatometry, the latter are believed to be incorrect, and, on the other hand, the contradiction between the measurement values obtained by linear and volumetric dilatometry for the range of phase transformation of the 2nd order of NaNO_3 is thought to be disposed of. Dilatometric curves with heating and cooling rates of up to 7 degrees/minute and the thermal expansion anomalies were recorded fairly well by an electronic dilatometer (Fig. 6). By comparing the curves of specific capacity with the differential-thermal curves (Fig. 7) a polythermal heat of the phase transformation of the 2nd kind was found, which does not contradict the statement that there appears no latent isothermal heat in these transitions. A differential-thermal analysis yielded a value of 1150 cal/mole for the polythermal heat when assuming the melting heat to be 3596 cal/mole. M. I. Kornfel'd and

Card 2/3

Phase Transition of the 2nd Kind in Sodium
Nitrate

87335
S/078/60/005/011/022/025/XX
B015/B060

A. A. Chudinov, L. Landau and Ye. M. Lifshits, I. Ye. Dzyaloshinskiy,
I. M. Khalatnikov, V. A. Sokolov, and N. Ye. Shmidt are mentioned. There
are 7 figures and 15 references: 9 Soviet, 3 US, 2 Dutch, and 1 Finnish.

SUBMITTED: April 8, 1960

Card 3/3

VOL'FKOVICH, S.I.; SOKOLOVSKIY, A.A.; RAVICH, G.B.

Vasilii Petrovich Kamzolkin. Zhur. prikl. khim. 33 no.6:1406-1407
Je '60. (MIRA 13:8)

(Kamzolkin, Vasilii Petrovich, 1886-1959)

MEYNER, L.Y.; KOLDOVA-MYI, V.A.; KARYAKINA, K.N.; RAYICH, G.B.

Studying the products of the combination of phenol-formaldehyde
resins with polyvinyl chloride. Plast. massy no.8:13-17 '65.
(MIRA 18:9)

L 01008-66 EWT(m)/EPF(c)/ENP(j) RM

ACCESSION NR: AP5019566

UR/0191/65/000/008/0013/0017
678.63—9:679.743.22

AUTHOR: Pevzner, L. V.⁴⁴⁵⁵; Kolodyazhnyy, V. Z.⁴⁴⁵⁵; Karyakina, K. N.⁴⁴⁵⁵; Ravich, G. B.^{39B 4455}

TITLE: Study of combination products of phenolformaldehyde resins¹⁵ with polyvinyl chloride⁶

SOURCE: Plasticheskiy massy, no. 8, 1965, 13-17

TOPIC TAGS: copolymer⁴⁴⁵⁵, polyvinyl chloride, phenolformaldehyde, resin, polyformaldehyde plastic

ABSTRACT: The purpose of this work was to investigate in detail the interaction of phenolformaldehyde resins with polyvinyl chloride to produce phenolates. The investigation consisted of thermogravimetric and thermomechanical measurements. For thermomechanical measurements specimens were produced by pressing. A polarizing microscope with a heated stage was used for microstructural analysis of specimens. A comparison of thermographic and thermomechanical properties of the starting resins and their combination products indicates that the combination of polyvinyl chloride with phenolformaldehyde resins in the presence of hexamethylenetetramine results in cross linking of phenolformaldehyde resins with polyvinyl chloride by methylene

Card 1/2

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ACCESSION NR: AP5019566

groups. This conclusion is verified by the solubility data and spectroscopic analysis. "The experimental part of this work was conducted with the participation of Ye. A. Dubrovina." Orig. art. has: 10 figures. 3

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MT

NO REF SOV: 005

OTHER: 000

Card 2/2 *DP*

RAVICH, G.B.; BOGUSH, O.F.

Polymorphism in the system m-dinitrobenzene - trinitrobenzene.
Izv. AN SSSR. Ser. khim. no.6:1077-1079 '65.

(MIRA 18:6)

1. Institut obshchey i neorganicheskoy khimii imeni Kurnakova
AN SSSR.

RAVICH, G.B., prof. (Moskva)

Who was the first to observe Brownian motion? Priroda 54 no.6:
74-77 Je '65. (MIRA 18:6)

YEGOROV, B.N.; RAVICH, G.B.; KRYLOV, B.G.

Phase transition of the second kind in 2,4,6-trinitrophenol.
Dokl. AN SSSR 152 no.2:370-371 S '63. (MIRA 16:11)

1. Institut obshchey i neorganicheskoy khimii im. M.S. Kurnakova
AN SSSR. Predstavleno akademikom I.V. Tananayevym.

ARUTYUNOVA, L.B.; RAVICH, G.B.

Study of infrared spectra in the polymorphic transformation of
tristearin. Dokl. AN SSSR 148 no.1:89-90 Ja '63. (MIRA 16:2)

1. Gruzinskiy politekhnicheskiy institut im. Lenina i Institut
obshchey i neorganicheskoy khimii im. Kurnakova AN SSSR. Pred-
stavleno akademikom I.I. Chernyayevym.
(Stearin—Spectra)

RAVICH, G.B.; YEGOROV, B.N.; KRYLOV, B.G.

Polymorphism of higher monoacid triglycerides studied by means of an volumetric microdilatomer with an automatic recording device. Izv.AN SSSR.Otd.khim.nauk no.3:481-487 Mr '63.
(MIRA 16:4)

1. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova
AN SSSR.

(Glycerides)

(Polymorphism)

RAVICH, G. B., prof. (Moskva)

"Introduction to physics" by A. I. Kitaigorodskii. Reviewed by
G. B. Ravich. Fiz. v shkole 22 no.4:97-98 J1-Ag '62.
(MIRA 15:10)

(Physics) (Kitaigorodskii, A. I.)

RAVICH, G.B.; BOGUSH, O.F.

Polymorphism of trinitrobenzene. Dokl. AN SSSR 142 no.4:831-834
F '62. (MIRA 15:2)

1. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova
AN SSSR. Predstavleno akademikom I.V.Tananayevym.
(Nitrobenzene)
(Polymorphism)

RAVICH, G.B.; MANUCHAROVA, I.F.

Deetherification of magnesium bromide trietherate. Zhur.
struk-khim. 2 no.4:449-451 J1-Ag '61. (MIRA 14:9)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.
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(Ethers)

(Magnesium bromide)

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B103/B147

11.2121

AUTHORS: Ravich, G. B., and Burtsev, Yu. N.

TITLE: Thermal conductivity of 2, 4, 6-trinitrotoluene in solid and liquid state

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 11, 1961, 2091 - 2092

TEXT: The thermal conductivity of 2, 4, 6-trinitrotoluene in solid and liquid state was studied from 10 to 96°C. An apparatus (Fig. 2) was used, which is based on the relative measurement of thermal conductivity of a thin layer of the substance at a steady heat flow. The apparatus allowed the study of very small quantities (~1 - 1.5 g). Blocks (1) and (3) are kept by thermostats at different temperatures so that a constant temperature difference is obtained between the two surfaces of a 0.5 - 1 mm layer. The small thickness and heating from above prevented convection. Due to special protective rings (5) and (6) the maximum heat losses are 190, the measuring error does not exceed 2%. The standard substances of wellknown heat conductivity were: water, glycerin, and air. The results

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Thermal conductivity of...

are shown in Fig. 1 which contains also data of Ref. 3 (see below), of A. F. Belyayev, N. B. Matyushko (Ref. 4, Dokl. AN SSSR, 30, No. 7, 624 (1941)) and of Ref. 2 (see below). The data of Refs. 3 and 4 agree well with those of the authors within the limits of experimental error. The values found by the authors are much higher than those of Ref. 2. Here, differences up to 200% are established for the thermal-conductivity data of trotyl. This is thought to be due to a systematic error. A sharp decrease of thermal conductivity of solid trotyl in the neighbourhood of the melting point was observed only when the thermal conductivity of a double layer consisting of fused and solid substance was measured. There are 2 figures and 7 references: 4 Soviet and 3 non-Soviet. The two references to English-language publications read as follows: Ref. 2: J. H. Read, D. M. Lloyd, Trans. Faraday Soc., N 309, 9, 720 (1948); Ref. 3: A. M. Prentiss, Rept. and Circ. of the Nat. Research Council, No. 52, 44 S.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry imeni N. S. Kurnakov of the Academy of Sciences USSR)

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